

What is claimed is:

1. A modified chemical vapor deposition (MCVD) device for manufacturing an optical fiber preform, comprising:
 - 5 a quartz tube;
 - a lathe for supporting the quartz tube so that the quartz is rotatable on a central axis thereof;
 - a bubbler system for generating reaction gas to be supplied into the quartz tube;
 - a rotary connector for interfacing a main headstock of the lathe with the bubbler
 - 10 system; and
 - a sealing chamber surrounding an area including the rotary connector in order to isolate the area including the rotary connector from the external atmosphere,
 - wherein the sealing chamber includes an input pipe for flowing inert gas therein and an output pipe for discharging the inert gas,
 - 15 whereby the inside of the sealing chamber is kept in an inert gas atmosphere.
2. An MCVD device according to claim 1, further comprising a cabinet for isolating an area including at least the quartz tube and its junctions from the external atmosphere and keeping the isolated area in an inert gas atmosphere.
- 20 3. An MCVD device according to claim 2, wherein the cabinet includes:
 - a gas torch installed at a lower end of the cabinet for supplying inert gas into the isolated area; and

a discharge hole for discharging the inert gas from the gas torch and a heated air near the quartz tube to outside.

4. An MCVD device according to claim 3,
5 wherein a gas purifier is connected to the gas torch in order to control a moisture content of the inert gas.
5. An MCVD device according to claim 4,
wherein a moisture content of the insert gas is less than 100 ppm.
- 10 6. An MCVD device according to any of claims 1 to 3,
wherein the inert gas is at least one selected from the group consisting of N₂, He and Ar.
- 15 7. An MCVD device according to any of claims 1 to 3, further comprising a pressure control means installed to the input pipe for controlling internal pressure of the sealing chamber.
8. An MCVD device according to claim 7,
20 wherein the internal pressure of the sealing chamber is kept in the range of 0.5 to 1.5 atm.
9. An MCVD device according to any of claims 1 to 3,

wherein a gas purifier is connected to the input pipe in order to control a moisture content of the inert gas.

10. An MCVD device according to claim 9,
5 wherein a moisture content of the inert gas is less than 10 ppm.

11. An MCVD device according to any of claims 1 to 3, further comprising a pressure gauge for measuring internal pressure of the sealing chamber.

10 12. An MCVD device according to any of claims 1 to 3, wherein the bubbler system includes:

at least one bubbler for generating reaction gas to be supplied to the quartz tube;
a mass flow controller for controlling a flow rate of the reaction gas supplied from the bubbler; and

15 a bubbler cabinet for isolating the bubbler and the mass flow controller from the external atmosphere, and keeping the isolated area in an inert gas atmosphere.

13. An MCVD device according to claim 12,
wherein an ultraviolet generator is installed in the bubbler cabinet to emit
20 ultraviolet rays having a wavelength of 400nm or below.

14. An MCVD device according to claim 12,
wherein a laser generator is installed in the bubbler cabinet to emit laser having

a wavelength of 400nm or below.

15. An MCVD device according to claim 12, wherein the bubbler cabinet is provided with:

- 5 a gas torch for supplying inert gas into the isolated area; and
a gas discharge hole for discharging the inert gas out of the bubbler cabinet.

16. An MCVD device according to claim 15,
wherein an internal pressure of the bubbler cabinet is kept in the range of 0.5 to
10 1.5 atm.

17. An MCVD device according to claim 15,
wherein a gas purifier is connected to the gas torch in order to control a moisture
content of the inert gas.

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18. An MCVD device according to claim 15,
wherein a moisture content of the inert gas is less than 10 ppm.

19. An MCVD device according to claim 15,
20 wherein the inert gas is at least one selected from the group consisting of N₂, He
and Ar.